

ABSTRACT OF THE INVENTION

An electrical coupler comprises an inner connector having upper and lower ends, an insulative outer connector element circumscribing the inner connector, and a thermally 5 conductive flange disposed over the upper end of the inner connector and the outer connector for conducting heat from the electrical conductor. The electrical conductor may be utilized in a substrate support for semiconductor wafer processing. The substrate support comprises a chuck body 10 having an electrode embedded therein, and an upper male connector coupled to the electrode and protruding from said chuck body. A cooling plate having the electrical coupler is positioned proximate to the chuck body. The upper male connector is inserted in the electrical coupler, and a power 15 source coupled to the lower portion of the electrical coupler chucks and biases a wafer to an upper surface of said chuck. The thermally conductive flange conducts and transfers heat generated from the upper male connector and electrical coupler to the cooling plate.

20

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